

# ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 28

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 08/12/2014		2. CONTRACT NO. (If any) NRC-HQ-50-14-E-0001		6. SHIP TO:	
3. ORDER NO NRC-HQ-20-14-T-0014		4. REQUISITION/REFERENCE NO NRR-14-0255		a. NAME OF CONSIGNEE  US NUCLEAR REGULATORY COMMISSION-	
5. ISSUING OFFICE (Address correspondence to) US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP 3WFN-05-C64MP ATTN KARLA F GARCIA WASHINGTON DC 20555-0001				b. STREET ADDRESS MAIL PROCESSING CENTER 4930 BOILING BROOK PARKWAY	
				c. CITY ROCKVILLE	d. STATE MD
				e. ZIP CODE 20852	
7. TO:				f. SHIP VIA	
a. NAME OF CONTRACTOR S W R I				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE	
c. STREET ADDRESS 6220 CULEBRA RD				REFERENCE YOUR:	
				Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
d. CITY SAN ANTONIO				e. STATE TX	f. ZIP CODE 782385166
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE OFF OF NUCLEAR REACTOR REGULATION	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))					
<input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					
12. F.O.B. POINT					
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) 08/11/2014	
a. INSPECTION Destination	b. ACCEPTANCE Destination			16. DISCOUNT TERMS	

## 17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	The Contractor shall provide services in accordance with the Statement of Work entitled Technical Assistance in Support of exelon Generation Company, LLC License Amendment Request to La Salle County Station, Units 1 and 2, Technical Continued ...					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont pages)
	21. MAIL INVOICE TO:						
	a. NAME US NUCLEAR REGULATORY COMMISSION						\$0.00
	b. STREET ADDRESS (or P.O. Box) ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE MAILSTOP 03-E17A						\$44,636.00
c. CITY ROCKVILLE		d. STATE MD	e. ZIP CODE 20852-2738				

22. UNITED STATES OF  
AMERICA BY (Signature)

08/12/2014



23. NAME (Typed)  
KARLA F. GARCIA  
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION  
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (Rev. 2/2012)  
Prescribed by GSA/FAR 48 CFR 53.213(f)

SUNSI REVIEW COMPLETE

TEMPLATE - ADM001

AUG 13 2014

ADM002

ORDER FOR SUPPLIES OR SERVICES  
SCHEDULE - CONTINUATION

PAGE NO

2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER

CONTRACT NO.

ORDER NO.

08/12/2014

NRC-HQ-50-14-E-0001

NRC-HQ-20-14-T-0014

ITEM NO (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Specification 3.7.3, "Ultimate Heat Sink."  NRC Contracting Officer's Representative: Andrew Proffitt 301-415-1418  Period of Performance: 08/12/2014 to 02/11/2015  Accounting Info: 2014-X0200-FEEBASED-20-20D008-11-4-149-1128- 251A					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$0.00

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PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 348 (Rev. 4/2006)  
Prescribed by GSA FAR (48 CFR) 53.213(f)

## CONTRACTOR ACCEPTANCE OF TASK ORDER NRC-HQ-20-14-T-0005

Acceptance of Task Order No: NRC-HQ-20-14-T-0014 should be made by having an official, authorized to bind your organization, execute two copies of this document in the space provided and return one copy to the Contracting Officer. You should retain the other copy for your records.

Accepted Task Order No. NRC-HQ-20-14-T-0014:



Name R. b. Kalmbach

Title Executive Director, Contracts

08/08/2014

Date

## SECTION B - Supplies or Services/Prices

### NRCB010 BRIEF PROJECT TITLE AND WORK DESCRIPTION

(a) The title of this project is: "Technical Assistance in Support of Exelon Generation Company, LLC License Amendment Request to La Salle County Station, Units 1 and 2, Technical Specification 3.7.3, "Ultimate Heat Sink""

(b) Summary work description: *The objective of this task order is to obtain technical expertise from the CNWRA/SwRI to assist the staff in ensuring that the changes in Ultimate Heat Sink (UHS) at La Salle County Station, Units 1 and 2, allow for continued safe operation at La Salle County Station, Units 1 and 2, and that the reviews are completed according to schedule.*

(End of Clause)

### PRICE/COST SCHEDULE

BASE PERIOD - August 11, 2014 through February 10, 2015				
CLIN NO.	DESCRIPTION OF SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL CPFF
00001	Review of License Amendment Request for the La Salle County Station Units, 1 and 2			
Total				\$44,636.00

### NRCB040A CONSIDERATION AND OBLIGATION—COST-PLUS-FIXED-FEE ALTERNATE I

(a) The total estimated cost to the Government for full performance of this contract is **\$44,636.00** of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the fixed-fee.

(b) There shall be no adjustment in the amount of the Contractor's fixed fee.

(c) The amount currently obligated by the Government with respect to this contract is **\$44,636.00**, of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which \$[REDACTED] represents the fixed-fee.

(d) This is an incrementally-funded contract and FAR 52.232-22 - "Limitation of Funds" applies.

(e) In accordance with FAR 52.216-8 - Fixed Fee, it is the policy of the NRC to withhold payment of fee after payment of [REDACTED] percent of the fee has been paid in order to protect the Government's interest. The amount of fixed-fee withheld from the contractor will not exceed 15 percent of the total fee or [REDACTED], whichever is less. Accordingly, the maximum amount of fixed-fee that may be held in reserve is [REDACTED]

(End of Clause)

## **SECTION C - Description/Specifications**

### **Statement of Work for Technical Assistance in Support of Exelon Generation Company, LLC License Amendment Request to La Salle County Station, Units 1 and 2, Technical Specification 3.7.3, "Ultimate Heat Sink"**

Title: Technical Assistance in Support of Exelon Generation Company, LLC License  
Amendment Request to La Salle County Station, Units 1 and 2, Technical Specification  
3.7.3, "Ultimate Heat Sink"

Task Order: 14

TAC Numbers: ME9076, ME9077, Fee Billable

Contracting Officer's Representative (COR): Andrew Proffitt, 301-415-1418,  
[Andrew.Proffitt@nrc.gov](mailto:Andrew.Proffitt@nrc.gov)

#### **PROJECT TITLE**

Technical Assistance in Support of Exelon Generation Company, LLC License Amendment  
Request to La Salle County Station, Units 1 and 2, Technical Specification 3.7.3, "Ultimate  
Heat Sink"

#### **BACKGROUND**

Exelon Generation Company, LLC (EGC) has submitted a license amendment request (LAR) pursuant to 10 CFR 50.90 for La Salle County Station, Units 1 and 2. The submittal proposed to modify the Ultimate Heat Sink (UHS) temperature required in Technical Specification 3.7.3 from a temperature less than 101.25 °F to a variable limit which would ensure the maximum temperature of the UHS supplied to the plant safety systems would remain below 107 °F.

The NRC is in need of technical assistance to ensure that the changes allow for continued safe operation at La Salle County Station, Units 1 and 2, and that the review is completed according to schedule. The review must be performed in accordance with NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants."

#### **SCOPE OF WORK**

The Center must provide all resources necessary to accomplish the tasks and deliverables described in this statement of work.

The Center must perform a review and evaluation of the technical basis for the LAR, specifically focusing on the methodology that EGC is using compared with that methodology originally given in NUREG-0693 and the other phenomena known to impact cooling pond heat transfer. The Center must provide input for the NRC safety evaluation report (SER) that documents the NRC's technical, legal, and safety basis for accepting the methodology proposed for determining a variable UHS temperature limit.

## **SPECIFIC TASKS**

The Center must perform the following tasks:

Using the criteria and guidelines found in Standard Review Plan (SRP) Chapter 15.0.2 and NUREG-0693, review the LAR submitted by EGC:

### **Task 1 Kickoff Meeting**

#### **1.a Preparation for Kickoff Meeting**

Become familiar with the LAR submittal by EGC.

#### **1.b Attend Kickoff Meeting**

Attend a one-time kick-off meeting (either in person or via conference call) to discuss the scope of work, expectations, task order management, and performance requirements of the task order. The kick-off meeting shall be held within twenty (20) working days after the Center receives the LAR materials.

### **Task 2 Review LAR Submission**

#### **2.a Evaluate the LAR Submittal**

Review the LAR to determine the technical accuracy and regulatory compliance of the request. Specifically focusing on the methodology used to generate the time dependent maximum UHS temperature and if this methodology is consistent with NUREG-0693 and is defensible based on the expected heat transfer from the UHS pond. The evaluation should include a review of: 1) the calculations and computer programs, which form the basis of the LAR, for technical acceptability; 2) the associated design inputs, assumptions, methodology and conclusions; 3) the applicant's selection of meteorological data for design input; 4) the applicant's choice of UHS modeling as it pertains to the actual physical parameters of the UHS and water flow paths; 5) the applicant's use of the analytical methods of NUREG 0693 as it pertains to determining UHS outlet temperature in 3 hour intervals.

#### **2.b Evaluate the RAI Responses**

The NRC staff has already issued a number of RAIs and obtained numerous pages of responses. These responses should be given a brief review for applicability to this issue and some responses may require more in-depth review depending on their relevance to this issue.

#### **2.c Prepare Draft Technical Evaluation Report**

Prepare a draft Technical Evaluation Report (TER) that incorporates the results of the review and evaluation. The TER must contain draft text, tables, and illustrations, as appropriate, suitable for inclusion in NRC's SER. The TER must provide sufficient information to adequately support the NRC staff's rationale for why there is reasonable

assurance that public health and safety is protected. It must be written so that a person with either non-nuclear technical background or non-technical background can understand the basis for conclusions cited.

Prepare final draft TER that incorporates comments provided by the COR.

As directed by the COR, participate in conference calls with EGC to discuss the LAR materials.

## **2.d Prepare RAIs**

Identify unresolved issues and any additional or clarifying information needed in the LAR submission pertaining to calculation of the UHS temperature. Prepare draft RAIs for use by NRC in requesting more information from EGC to clarify issues raised during review of the LAR.

As directed by the COR, participate in conference calls with EGC to discuss additional information to be provided or clarified with the LAR.

## **2.e Review RAI Responses**

Review EGC's responses to the RAIs to determine whether they adequately resolve the outstanding issues.

## **2.f Update the TER**

Update the draft TER prepared under Task 2.b to incorporate EGC's RAI responses and revise related portions of the draft text, tables, and illustrations in the TER. Prepare a final TER that incorporates comments provided by the COR.

As directed by the COR, participate in conference calls with EGC to discuss the responses of the RAIs.

# **1. APPLICABLE DOCUMENTS AND STANDARDS**

1. 10 CFR 50.90
2. 10 CFR 50.37
3. 10 CFR 50 Appendix A General Design Criteria
4. SRP 9.2.5, "Ultimate Heat Sink"
5. NUREG-0693
6. Regulatory Guide 1.27 Revision 3, "Ultimate Heat Sink"
7. SRP 15.0.2, "Review of transients and Accident Analysis Methods"
8. Ryan, P.J., and Harleman, D.R.F., *Analytical and Experimental Study of Transient Cooling Pond Behavior*. Report No. 161, Department of Civil Engineering MIT, January 1973.
9. Brady, D.K., Graves, Jr. W.L., and Geyer, J.C., *Cooling Water Studies for Edison Electric Institute*. Research Project RP-49, Department of Geography and Environmental Engineering, The Johns Hopkins University, November 1969
10. Effects of Geographical Location on Cooling Pond Requirements and Performance, EPA, Water Quality Office

## **DELIVERABLES AND DELIVERY SCHEDULE**

The schedule for project deliverables is shown in the following table.

<b>Deliverable Number</b>	<b>Deliverable and Acceptance Criteria</b>	<b>Deliverable Due Date</b>
1	For Task 2.c, Draft TER  Acceptance Criteria: Report must have the required content and follow the required format	NLT 4 weeks after award of task order
2	For Task 2.c, Final Draft TER  Acceptance Criteria: All COR comments are addressed in the TER.	NLT 1 week after receipt of COR comments
3	For Task 2.d, Draft RAIs  Acceptance Criteria: RAIs are technically sound, adequately address identified issues, and include a regulatory basis for each request.	NLT 4 weeks after award of
4	For Task 2.d, Final RAIs  Acceptance Criteria: All COR comments are reflected in the RAIs.	NLT 1 week after receipt of COR comments
5	For Task 2.f, Draft Updated TER  Acceptance Criteria: Deliverable contains required content	NLT 2 weeks after receipt of RAI responses
6	For Task 2.f, Final Updated TER  Acceptance Criteria: All COR comments are addressed in the updated TER	NLT 1 week after receipt of COR comments

All deliverables shall include the following identifying information:

Agreement No.  
Task Order No.  
JCN No.  
TAC No.  
Licensee  
Site

The Center must provide all reports as draft products. The COR will review all draft deliverables (and coordinate any internal NRC staff review, if needed) and provide comments back to the laboratory. The Center must revise the draft deliverables based on

the comments provided by the COR, and then deliver the final version of the deliverable. When mutually agreed upon between the Center and the COR, the Center may submit preliminary or partial drafts to help gauge the Center's understanding of the particular work requirement.

The above deliverables shall be provided electronically and in hard copy (upon request) to the Contracting Officer (CO) and COR.

The COR will acknowledge receipt of deliverables by e-mail.

#### **REQUIRED LABOR CATEGORIES**

Specialized experience must include expertise in such areas as heat transfer phenomena associated with ponds and lakes, how such phenomena is commonly modeled, and the models, methods, and rationale for the methodology described in NUREG-0693 (Analysis of Ultimate Heat Sink Cooling Ponds). This expertise must also include familiarity with all NRC regulations, criteria, or guidelines pertaining to UHS analysis and how such information is documented in a safety evaluation.

Specific qualifications for this effort include:

***Professional Level 3*** with extensive background experience as heat transfer phenomena associated with ponds and lakes, how such phenomena is commonly modeled, and the models, methods, and rationale for the methodology described in NUREG-0693 (Analysis of Ultimate Heat Sink Cooling Ponds). This expertise must also include familiarity with all NRC regulations, criteria, or guidelines pertaining to UHS analysis and how such information is documented in a safety evaluation.

The Center shall provide a project manager to oversee the effort and ensure the timely submittal of accurate and complete deliverables.

The NRC will rely on representation made by the Center concerning the qualifications of the personnel assigned to this task order, including assurance that all information contained in the technical and cost proposals, including resumes, is accurate and truthful. The resume for each professional proposed to work under this task order (principal investigators, technical staff, employees, consultants, specialists or subcontractors) shall describe the individual's experience in applying his or her area of engineering specialization to work in the proposed area. The use of particular personnel on this task order is subject to the COR and CO approval. This includes any proposed changes to key personnel during the life of the task order.

The estimated level of effort in professional staff hours apportioned among the tasks by labor category is as shown in the table below. The estimate is advisory only and not to be considered as the sole basis for development of a staffing plan.

Task Number	Labor Category	Estimated Labor Hours	Total
		FY 2014	
1	Professional Level 3	10	10
	Project Manager	2	2
2	Professional Level 3	140	140
	Project Manager	14	14
	Total	166	166

### **PERIOD OF PERFORMANCE**

The period of performance shall be from August 12, 2014 through February 11, 2015.

### **TRAVEL**

Optional: 1 Person, 2 Day Trip to NRC Headquarters or Licensee Facility.

All travel requires written approval from the COR. Foreign travel for the DOE laboratory personnel requires a 60-day lead time for NRC approval. For prior approval of foreign travel, the DOE laboratory shall submit an NRC Form 445, "Request for Approval of Official Foreign Travel." NRC Form 445 is available in the MD 11.7 Documents library and on the NRC Web site at: <http://www.nrc.gov/reading-rm/doc-collections/forms/>. Foreign travel is approved by the NRC Executive Director for Operations (EDO).

## **SECTION D - Packaging and Marking**

### **NRCD020 BRANDING**

The Contractor is required to use the statement below in any publications, presentations, articles, products, or materials funded under this contract/order, to the extent practical, in order to provide NRC with recognition for its involvement in and contribution to the project. If the work performed is funded entirely with NRC funds, then the contractor must acknowledge that information in its documentation/presentation.

Work Supported by the U.S. Nuclear Regulatory Commission (NRC), Office of Nuclear Reactor Regulation, under Contract/order number NRC-HQ-50-14-E-0001/NRC-HQ-20-14-T-0005.

(End of Clause)

### **NRCD010 PACKAGING AND MARKING**

(a) The Contractor shall package material for shipment to the NRC in such a manner that will ensure acceptance by common carrier and safe delivery at destination. Containers and closures shall comply with the Surface Transportation Board, Uniform Freight Classification Rules, or regulations of other carriers as applicable to the mode of transportation.

(b) On the front of the package, the Contractor shall clearly identify the contract number under which the product is being provided.

(c) Additional packaging and/or marking requirements are as follows: None.

(End of Clause)

## **SECTION E - Inspection and Acceptance**

### **2052.215-71 PROJECT OFFICER AUTHORITY (OCT 1999)**

(a) The contracting officer's authorized representative hereinafter referred to as the project officer for this contract is:

Name: **Andrew Proffitt**  
Address: **Mail Stop: OWFN/ 10 B3**  
Washington, DC 20555  
Telephone Number: **301-415-1418**

(b) Performance of the work under this contract is subject to the technical direction of the NRC project officer. The term technical direction is defined to include the following:

(1) Technical direction to the contractor which shifts work emphasis between areas of work or tasks, authorizes travel which was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work or changes to specific travel identified in the Statement of Work), fills in details, or otherwise serves to accomplish the contractual statement of work.

(2) Provide advice and guidance to the contractor in the preparation of drawings, specifications, or technical portions of the work description.

(3) Review and, where required by the contract, approve technical reports, drawings, specifications, and technical information to be delivered by the contractor to the Government under the contract.

(c) Technical direction must be within the general statement of work stated in the contract. The project officer does not have the authority to and may not issue any technical direction which:

(1) Constitutes an assignment of work outside the general scope of the contract.

(2) Constitutes a change as defined in the "Changes" clause of this contract.

(3) In any way causes an increase or decrease in the total estimated contract cost, the fixed fee, if any, or the time required for contract performance.

(4) Changes any of the expressed terms, conditions, or specifications of the contract.

(5) Terminates the contract, settles any claim or dispute arising under the contract, or issues any unilateral directive whatever.

(d) All technical directions must be issued in writing by the project officer or must be confirmed by the project officer in writing within ten (10) working days after verbal issuance. A copy of the written direction must be furnished to the contracting officer. A copy of NRC Form 445, Request for Approval of Official Foreign Travel, which has received final approval from the NRC must be furnished to the contracting officer.

(e) The contractor shall proceed promptly with the performance of technical directions duly issued by the project officer in the manner prescribed by this clause and within the project officer's authority under the provisions of this clause.

(f) If, in the opinion of the contractor, any instruction or direction issued by the project officer is within one of the categories defined in paragraph (c) of this section, the contractor may not proceed but shall notify the contracting officer in writing within five (5) working days after the receipt of any instruction or direction and shall request that contracting officer to modify the contract accordingly. Upon receiving the notification from the contractor, the contracting officer shall issue an appropriate contract modification or advise the contractor in writing that, in the contracting officer's opinion, the technical direction is within the scope of this article and does not constitute a change under the "Changes" clause.

(g) Any unauthorized commitment or direction issued by the project officer may result in an unnecessary delay in the contractor's performance and may even result in the contractor expending funds for unallowable costs under the contract.

(h) A failure of the parties to agree upon the nature of the instruction or direction or upon the contract action to be taken with respect to the instruction or direction is subject to 52.233-1 - Disputes.

(i) In addition to providing technical direction as defined in paragraph (b) of the section, the project officer shall:

(1) Monitor the contractor's technical progress, including surveillance and assessment of performance, and recommend to the contracting officer changes in requirements.

(2) Assist the contractor in the resolution of technical problems encountered during performance.

(3) Review all costs requested for reimbursement by the contractor and submit to the contracting officer recommendations for approval, disapproval, or suspension of payment for supplies and services required under this contract.

(End of Clause)

## **SECTION F - Deliveries or Performance**

### **NRCF032 TASK/DELIVERY ORDER PERIOD OF PERFORMANCE (SEP 2013)**

This order shall commence on August 12, 2014 and will expire on February 11, 2015.

(End of Clause)

### **NRCF010 PLACE OF DELIVERY-REPORTS**

The items to be furnished hereunder shall be delivered, with all charges paid by the Contractor, to:

- a. Name: Andrew Proffitt (1 Electronic Copy)
- b. Contracting Officer's Representative (COR)
- c. Address: Andrew.Proffitt@nrc.gov (1 hard copy)
  
- d. Name: Hugo Alcantara (1 Electronic Copy)
- e. Contract Specialist (CS)
- f. Address: Hugo.Alcantara@nrc.gov (1 hard copy)

(End of Clause)

## **SECTION G - Contract Administration Data**

### **NRCG030 ELECTRONIC PAYMENT (SEP 2014)**

The Debt Collection Improvement Act of 1996 requires that all payments except IRS tax refunds be made by Electronic Funds Transfer. Payment shall be made in accordance with FAR 52.232-33, entitled "Payment by Electronic Funds-Central Contractor Registration".

To receive payment, the contractor shall prepare invoices in accordance with NRC's Billing Instructions. Claims shall be submitted on the payee's letterhead, invoice, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal – Continuation Sheet." The preferred method of submitting invoices is electronically to: [NRCPayments@nrc.gov](mailto:NRCPayments@nrc.gov).

(End of Clause)

## SECTION H - Special Contract Requirements

### 2052.215-70 KEY PERSONNEL (JAN 1993)

(a) The following individuals are considered to be essential to the successful performance of the work hereunder:

<u>Name</u>	<u>Title</u>
Lane Howard	Program Manager
Dr. Sitakanta Mohanty,	Principal Investigator

The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

(b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.

(c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer and the project officer shall evaluate the contractor's request and the contracting officer shall promptly notify the contractor of his or her decision in writing.

(d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

(End of Clause)

### 2052.215-78 TRAVEL APPROVALS AND REIMBURSEMENT (OCT 1999) - ALTERNATE I (OCT 1999)

(a) Total expenditure for travel may not exceed **\$1,207.00** without the prior approval of the contracting officer.

(b) All foreign travel must be approved in advance by the NRC on NRC Form 445, Request for Approval of Official Foreign Travel, and must be in compliance with FAR 52.247-63 Preference for U.S. Flag Air Carriers. The contractor shall submit NRC Form 445 to the NRC no later than 30 days prior to the commencement of travel.

(c) The contractor will be reimbursed only for travel costs incurred that are directly related to this contract and are allowable subject to the limitations prescribed in FAR 31.205-46.

(d) It is the responsibility of the contractor to notify the contracting officer in accordance with the FAR Limitations of Cost clause of this contract when, at any time, the contractor learns that travel expenses will cause the contractor to exceed the travel ceiling amount identified in paragraph (a) of this clause.

(e) Reasonable travel costs for research and related activities performed at State and nonprofit institutions, in accordance with Section 12 of Pub. L. 100-679, must be charged in accordance with the contractor's institutional policy to the degree that the limitations of Office of Management and Budget (OMB) guidance are not exceeded. Applicable guidance documents include OMB Circular A-87, Cost Principles for State and Local Governments; OMB Circular A-122, Cost Principles for Nonprofit Organizations; and OMB Circular A-21, Cost Principles for Educational Institutions.

(End of Clause)

#### **NRCH480 USE OF AUTOMATED CLEARING HOUSE (ACH) ELECTRONIC PAYMENT/REMITTANCE ADDRESS**

The Debt Collection Improvement Act of 1996 requires that all Federal payments except IRS tax refunds be made by Electronic Funds Transfer. It is the policy of the Nuclear Regulatory Commission to pay government vendors by the Automated Clearing House (ACH) electronic funds transfer payment system. Item 15C of the Standard Form 33 may be disregarded.

(End of Clause)

#### **NRCH470 GREEN PURCHASING (SEP 2013)**

(a) In furtherance of the sustainable acquisition goals included in Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," products and services acquired under this contract/order shall be energy-efficient (Energy Star or Federal Energy Management Program (FEMP) designated), water-efficient, biobased, environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, recycled content, and non-toxic or less toxic alternatives, to the maximum extent practicable in meeting NRC contractual requirements.

(b) See NRC's Green Purchasing Plan (GPP) at:

<http://pbadupws.nrc.gov/docs/ML1219/ML12191A130.pdf> and the General Service Administration's (GSA) Green Procurement Compilation at:  
<http://www.gsa.gov/portal/content/198257>.

(c) The contractor shall flow down this clause into all subcontracts and other agreements that relate to performance of this contract/order.

(End of Clause)

#### **NRCH410 WHISTLEBLOWER PROTECTION FOR NRC CONTRACTOR AND SUBCONTRACTOR EMPLOYEES**

(a) The U.S. Nuclear Regulatory Commission (NRC) contractor and its subcontractor are subject to the Whistleblower Employee Protection public law provisions as codified at 42 U.S.C. 5851. NRC contractor(s) and subcontractor(s) shall comply with the requirements of this Whistleblower Employee Protection law, and the implementing regulations of the NRC and the Department of Labor (DOL). See, for example, DOL Procedures on Handling Complaints at 29 C.F.R. Part 24 concerning the employer obligations, prohibited acts, DOL procedures and the requirement for prominent posting of notice of Employee Rights at Appendix A to Part 24 entitled: "Your Rights Under the Energy Reorganization Act".

(b) Under this Whistleblower Employee Protection law, as implemented by regulations, NRC contractor and subcontractor employees are protected from discharge, reprisal, threats, intimidation, coercion, blacklisting or other employment discrimination practices with respect to compensation, terms, conditions or privileges of their employment because the contractor or subcontractor employee(s) has provided notice to the employer, refused to engage in unlawful practices, assisted in proceedings or testified on activities concerning alleged violations of the Atomic Energy Act of 1954 (as amended) and the Energy Reorganization Act of 1974 (as amended).

(c) The contractor shall insert this or the substance of this clause in any subcontracts involving work performed under this contract.

(End of Clause)

#### **NRCH400 SECURITY REQUIREMENTS RELATING TO THE PRODUCTION OF REPORT(S) OR THE PUBLICATION OF RESULTS UNDER CONTRACTS, AGREEMENTS, AND GRANTS**

##### **Review and Approval of Reports**

(a) Reporting Requirements. The contractor/grantee shall comply with the terms and conditions of the contract/grant regarding the contents of the draft and final report, summaries, data, and related documents, to include correcting, deleting, editing, revising, modifying, formatting, and supplementing any of the information contained therein, at no additional cost to the NRC. Performance under the contract/grant will not be deemed accepted or completed until it complies with the NRC's directions. The reports, summaries, data, and related documents will be considered draft until approved by the NRC. The contractor/grantee agrees that the direction, determinations, and decisions on approval or disapproval of reports, summaries, data, and related documents created under this contract/grant remain solely within the discretion of the NRC.

(b) Publication of Results. Prior to any dissemination, display, publication, or release of articles, reports, summaries, data, or related documents developed under the contract/grant, the contractor/grantee shall submit them to the NRC for review and approval. The contractor/grantee shall not release, disseminate, display or publish articles, reports, summaries, data, and related documents, or the contents therein, that have not been reviewed and approved by the NRC for release, display, dissemination or publication. The contractor/grantee agrees to conspicuously place any disclaimers, markings or notices, directed by the NRC, on any articles, reports, summaries, data, and related documents that the contractor/grantee intends to release, display, disseminate or publish to other persons, the public, or any other entities. The contractor/grantee agrees, and grants, a royalty-free, nonexclusive, irrevocable worldwide

license to the government, to use, reproduce, modify, distribute, prepare derivative works, release, display or disclose the articles, reports, summaries, data, and related documents developed under the contract/grant, for any governmental purpose and to have or authorize others to do so.

(c) Identification/Marking of Sensitive Unclassified Non-Safeguards Information (SUNSI) and Safeguards Information (SGI). The decision, determination, or direction by the NRC that information possessed, formulated or produced by the contractor/grantee constitutes SUNSI or SGI is solely within the authority and discretion of the NRC. In performing the contract/grant, the contractor/grantee shall clearly mark SUNSI and SGI, to include for example, OUO-Allegation Information or OUO-Security Related Information on any reports, documents, designs, data, materials, and written information, as directed by the NRC. In addition to marking the information as directed by the NRC, the contractor shall use the applicable NRC cover sheet (e.g., NRC Form 461 Safeguards Information) in maintaining these records and documents. The contractor/grantee shall ensure that SUNSI and SGI is handled, maintained and protected from unauthorized disclosure, consistent with NRC policies and directions. The contractor/grantee shall comply with the requirements to mark, maintain, and protect all information, including documents, summaries, reports, data, designs, and materials in accordance with the provisions of Section 147 of the Atomic Energy Act of 1954 as amended, its implementing regulations (10 CFR 73.21), Sensitive Unclassified Non-Safeguards and Safeguards Information policies, and NRC Management Directives and Handbooks 12.5, 12.6 and 12.7.

(d) Remedies. In addition to any civil, criminal, and contractual remedies available under the applicable laws and regulations, failure to comply with the above provisions, and/or NRC directions, may result in suspension, withholding, or offsetting of any payments invoiced or claimed by the contractor/grantee.

(e) Flowdown. If the contractor/grantee intends to enter into any subcontracts or other agreements to perform this contract/grant, the contractor/grantee shall include all of the above provisions in any subcontracts or agreements.

(End of Clause)

## **SECTION I - Contract Clauses**

### **52.217-8 OPTION TO EXTEND SERVICES (NOV 1999)**

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 15 days.

(End of clause)

## SECTION J - List of Documents, Exhibits and Other Attachments

### BILLING INSTRUCTIONS FOR COST-REIMBURSEMENT TYPE CONTRACTS (MAY 2013)

**General:** During performance and through final payment of this contract, the contractor is responsible for the accuracy and completeness of data within the System for Award Management (SAM) database and for any liability resulting from the Government's reliance on inaccurate or incomplete SAM data.

The contractor shall prepare invoices/vouchers for reimbursement of costs in the manner and format described herein. FAILURE TO SUBMIT INVOICES/VOUCHERS IN ACCORDANCE WITH THESE INSTRUCTIONS MAY RESULT IN REJECTION OF THE INVOICE/VOUCHER AS IMPROPER.

**Standard Forms:** Reimbursement requests shall be submitted on the payee's letterhead, invoice/voucher, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal--Continuation Sheet."

**Electronic Invoice/Voucher Submissions:** The preferred method of submitting invoices/vouchers is electronically to the U.S. Nuclear Regulatory Commission, via email to: [NRCPayments@nrc.gov](mailto:NRCPayments@nrc.gov).

**Hard-Copy Invoice/Voucher Submissions:** If you submit a hard-copy of the invoice/voucher, a signed original and supporting documentation shall be submitted to the following address:

NRC Payments  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Mailstop O3-E17A  
Rockville, MD 20852-2738

**Purchase of Capital Property:** *(\$50,000 or more with life of one year or longer)*

Contractors must report to the Contracting Officer, electronically, any capital property acquired with contract funds having an initial cost of \$50,000 or more, in accordance with procedures set forth in NRC Management Directive (MD) 13.1, IV, C – "Reporting Requirements" (revised 2/16/2011).

**Agency Payment Office:** Payment will continue to be made by the office designated in the contract in Block 12 of the Standard Form 26, or Block 25 of the Standard Form 33, whichever is applicable.

**Frequency:** The contractor shall submit requests for reimbursement once each month, unless otherwise authorized by the Contracting Officer.

**Format:** Invoices/Vouchers shall be submitted in the format depicted on the attached sample form entitled "Invoice/Voucher for Purchases and Services Other Than Personal". Alternate formats are permissible only if they address all requirements of the Billing Instructions. The

instructions for preparation and itemization of the invoice/voucher are included with the sample form.

**Task Order Contracts:** The contractor must submit a separate invoice/voucher for each individual task order with detailed cost information. This includes all applicable cost elements and other items discussed in paragraphs (a) through (s) of the attached instructions. In addition, the invoice/voucher must specify the contract number, and the NRC-assigned task/delivery order number.

**Billing of Costs after Expiration of Contract:** If costs are incurred during the contract period and invoiced after the contract has expired, you must cite the period during which these costs were incurred. To be considered a proper expiration invoice/voucher, the contractor shall clearly mark it "EXPIRATION INVOICE" or "EXPIRATION VOUCHER".

Final invoices/vouchers shall be marked "FINAL INVOICE" or "FINAL VOUCHER".

**Currency:** Invoices/Vouchers must be expressed in U.S. Dollars.

**Supersession:** These instructions supersede previous Billing Instructions for Cost-Reimbursement Type Contracts (July 2011).

**INVOICE/VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL  
(SAMPLE FORMAT - COVER SHEET)**

**1. Official Agency Billing Office**

NRC Payments  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Mailstop O3-E17A  
Rockville, MD 20852-2738

**2. Invoice/Voucher Information**

- a. Payee's DUNS Number or DUNS+4. The Payee shall include the Payee's Data Universal Number (DUNS) or DUNS+4 number that identifies the Payee's name and address. The DUNS+4 number is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the Payee to identify alternative Electronic Funds Transfer (EFT) accounts for the same parent concern.
- b. Taxpayer Identification Number. The Payee shall include the Payee's taxpayer identification number (TIN) used by the Internal Revenue Service (IRS) in the administration of tax laws. (See IRS Web site: [http://www.irs.gov/Businesses/Small-Businesses-&Self-Employed/Employer-ID-Numbers-\(EINs\)](http://www.irs.gov/Businesses/Small-Businesses-&Self-Employed/Employer-ID-Numbers-(EINs)))).
- c. Payee's Name and Address. Show the name of the Payee as it appears in the contract and its correct address. If the Payee assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Payee shall require as a condition of any such assignment, that the assignee shall register separately in the System for Award Management (SAM) database at <http://sam.gov> and shall be paid by EFT in accordance with the terms of this contract. See Federal Acquisition Regulation (FAR) 52.232-33(g) Payment by Electronic Funds Transfer - Central Contractor Registration (October 2003).
- d. Contract Number. Insert the NRC contract number (including Enterprise-wide Contract (EWC)), GSA Federal Supply Schedule (FSS), Governmentwide Agency Contract (GWAC) number, or Multiple Agency Contract (MAC) number, as applicable.
- e. Task Order Number. Insert the task/delivery order number (If Applicable). **Do not include more than one task order per invoice or the invoice may be rejected as improper.**
- f. Invoice/Voucher. The appropriate sequential number of the invoice/voucher, beginning with 001 should be designated. Contractors may also include an individual internal accounting number, if desired, in addition to the 3-digit sequential number.
- g. Date of Invoice/Voucher. Insert the date the invoice/voucher is prepared.
- h. Billing Period. Insert the beginning and ending dates (day, month, year) of the period during which costs were incurred and for which reimbursement is requested.

i. Description of Deliverables. Provide a brief description of supplies or services, quantity, unit cost, and total cost.

j. Work Completed. Provide a general summary description of the services performed or products submitted for the invoice period and specify the section or Contract Line Item Number (CLIN) or SubCLIN in the contract pertaining to the required deliverable(s).

k. Shipping. Insert weight and zone of shipment, if shipped by parcel post.

l. Charges for freight or express shipments. Attach prepaid bill if shipped by freight or express.

m. Instructions. Include instructions to consignee to notify the Contracting Officer of receipt of shipment.

n. For Indefinite Delivery contracts, the final invoice/voucher shall be marked "FINAL INVOICE" or "FINAL VOUCHER".

o. Direct Costs. Insert the amount billed for the following cost elements, adjustments, suspensions, and total amounts, for both the current billing period and for the cumulative period (from contract inception to end date of this billing period).

- (1) Direct Labor. This consists of salaries and wages paid (or accrued) for direct performance of the contract itemized as follows:

<u>Labor</u> <u>Category</u>	<u>Hours</u> <u>Billed</u>	<u>Rate</u>	<u>Cumulative</u> <u>Total</u>	<u>Hours Billed</u>
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(2) Fringe Benefits. This represents fringe benefits applicable to direct labor and billed as a direct cost. Where a rate is used indicate the rate. Fringe benefits included in direct labor or in other indirect cost pools should not be identified here.

(3) Contractor-acquired property (\$50,000 or more). List each item costing \$50,000 or more and having a life expectancy of more than one year. List only those items of equipment for which reimbursement is requested. For each such item, list the following (as applicable): (a) an item description, (b) manufacturer, (c) model number, (d) serial number, (e) acquisition cost, (f) date of purchase, and (g) a copy of the purchasing document.

(4) Contractor-acquired property (under \$50,000), Materials, and Supplies. These are equipment other than that described in (3) above, plus consumable materials and supplies. List by category. List items valued at \$1,000 or more separately. Provide the item number for each piece of equipment valued at \$1,000 or more.

(5) Premium Pay. This enumeration in excess of the basic hourly rate. (Requires written approval of the Contracting Officer.)

(6) Consultant Fee. The supporting information must include the name, hourly or daily rate of the consultant, and reference the NRC approval (if not specifically approved in the original contract).

(7) Travel. Total costs associated with each trip must be shown in the following format:

<u>Start Date</u>		<u>Destination</u>		<u>Costs</u>
From	To	From	To	\$

*(Must include separate detailed costs for airfare, per diem, and other transportation expenses. All costs must be adequately supported by copies of receipts or other documentation.)*

(8) Subcontracts. Include separate detailed breakdown of all costs paid to approved subcontractors during the billing period.

(9) Other Costs. List all other direct costs by cost element and dollar amount separately.

p. Indirect Costs (Overhead and General and Administrative Expense). Cite the formula (rate and base) in effect in accordance with the terms of the contract, during the time the costs were incurred and for which reimbursement is requested.

q. Fixed-Fee. If the contract provides for a fixed-fee, it must be reimbursed as indicated in the contract. Cite the formula or method of computation. Include this information as it applies to individual task orders as well.

(1) The NRC will withhold payment of 15% of the negotiated contract fixed-fee amount, not to exceed \$100,000.

(2) If the fee withholding amount has reached \$100,000, the contractor may resume billing the NRC for the balance of its fee under subsequent invoices for work completed.

(3) Any fee amounts withheld by the NRC will be paid to the contractor during contract closeout in increments, following the submission/settlement of indirect rate proposals in accordance with FAR 52.216-8, "Fixed Fee" (JUN 2011).

r. Total Amount Billed. Insert columns for total amounts for the current and cumulative periods.

s. Adjustments. Insert columns for any adjustments, including outstanding suspensions for deficient or defective products or nonconforming services, for the current and cumulative periods.

t. Grand Totals.

### **3. Sample Invoice/Voucher Information**

#### **Sample Invoice/Voucher Information (Supporting Documentation must be attached)**

This invoice/voucher represents reimbursable costs for the billing period from \_\_\_\_\_ through \_\_\_\_\_

		<u>Amount Billed</u>	
		<u>Current Period</u>	<u>Cumulative</u>
<b>(a)</b>	<b><u>Direct Costs</u></b>		
(1)	Direct labor	\$ _____	\$ _____
(2)	Fringe benefits (% of direct labor)	\$ _____	\$ _____
(3)	Government property (\$50,000 or more)	\$ _____	\$ _____
(4)	Government property, Materials, and Supplies (under \$50,000 per item)	\$ _____	\$ _____
(5)	Premium pay (NRC approved overtime)	\$ _____	\$ _____
(6)	Consultants Fee	\$ _____	\$ _____
(7)	Travel	\$ _____	\$ _____
(8)	Subcontracts	\$ _____	\$ _____
(9)	Other costs	\$ _____	\$ _____
Total Direct Costs:		\$ _____	\$ _____
<b>(b)</b>	<b><u>Indirect Costs</u></b> (provide the rate information applicable to your firm)		
(10)	Overhead _____ % of _____ (Indicate Base)	\$ _____	\$ _____
(11)	General and Administrative (G&A) _____ % of _____ (Indicate Base)	\$ _____	\$ _____
Total Indirect Costs:		\$ _____	\$ _____
<b>(c)</b>	<b><u>Fixed-Fee:</u></b>		
(12)	Fixed-Fee Calculations:		
i.	Total negotiated contract fixed-fee percent _____ and amount \$ _____		
ii.	85% allowable fee amount \$ _____		
iii.	Cumulative fee billed on prior invoices \$ _____		
iv.	Fee due this invoice (not to exceed 85% of fee earned based upon negotiated contract fee percentage) \$ _____		
<i>Note: The fee balance withheld by NRC may <u>not</u> exceed \$100,000.</i>			
Total Fixed-Fee:		\$ _____	\$ _____
<b>(d)</b>	<b>Total Amount Billed</b>	\$ _____	\$ _____

(e)	Adjustments (+/-)	\$ _____	\$ _____
(f)	Grand Total	\$ _____	\$ _____

(The invoice/voucher format provided above must include information similar to that included below in the following to ensure accuracy and completeness.)

### SAMPLE SUPPORTING INFORMATION

The budget information provided below is for format purposes only and is illustrative.

#### Cost Elements:

1) Direct Labor - \$2,400

<u>Labor Category</u>	<u>Hours Billed</u>	<u>Rate</u>	<u>Total</u>	<u>Cumulative Hours Billed</u>
Senior Engineer I	100	\$14.00	\$1,400	975
Engineer	50	\$10.00	\$ 500	465
Computer Analyst	100	\$ 5.00	<u>\$ 500</u>	<u>320</u>
			\$2,400	1,760 hrs.

2) Fringe Benefits - \$480

Fringe @ 20% of Direct Salaries

<u>Labor Category</u>	<u>Salaries</u>	<u>Fringe Amount</u>
Senior Engineer I	\$1,400	\$280
Engineer	\$ 500	\$100
Computer Analyst	<u>\$ 500</u>	<u>\$100</u>
	\$2,400	\$480

3) Government-furnished and contractor-acquired property (\$50,000 or more) - \$60,000

Prototype Spectrometer - item number 1000-01 = \$60,000

4) Government-furnished and contractor-acquired property (under \$50,000), Materials, and Supplies - \$2,000

10 Radon tubes @ \$110.00	= \$1,100
6 Pairs Electrostatic gloves @ \$150.00	= <u>\$ 900</u>
	\$2,000

5) Premium Pay - \$150

Walter Murphy - 10 hours @ \$10.00 Per Hour (Reg. Pay) = \$100 x 1.5 OT rate = \$150  
(EX: Premium pay for this individual was approved and authorized under this contract by the NRC Contracting Officer by letter dated 6/1/2011.)

6) Consultants' Fee - \$100

Dr. Carney - 1 hour fully-burdened @ \$100 = \$100

7) Travel - \$2,640

(i) Airfare: (2 Roundtrip trips for 1 person @ \$300 per r/t ticket)

<u>Start Date</u>	<u>End Date</u>	<u>Days</u>	<u>From</u>	<u>To</u>	<u>Cost</u>
4/1/2011	4/7/2011	7	Philadelphia, PA	Wash, D.C.	\$300
7/1/2011	7/8/2011	8	Philadelphia, PA	Wash, D.C.	\$300

(ii) Per Diem: \$136/day x 15 days = \$2,040

8) Subcontracting - \$30,000

Company A	= \$10,000
Company B	= <u>\$20,000</u>
	\$30,000

(EX: Subcontracts for Companies A & B were consented to by the Contracting Officer by letter dated 6/15/2011.)

9) Other Costs - \$5,100

Honorarium for speaker at American Nuclear Society conference = \$5,000  
*Nuclear Planet Journal* subscription fee = \$100

10) Overhead Expense - \$41,148

Overhead @ 40% of Total Direct Costs

11) General and Administrative (G&A) Expense - \$22,784

G&A @ 20% of Total Costs, excluding subcontracts and consultants

12) Fixed-Fee - \$8,218

Fixed-Fee applied to Total Costs @ 5%

Fixed-Fee Calculations:

- i. Total contract fixed-fee \$100,000
- ii. 85% allowable fee \$85,000
- iii. Cumulative fee billed on prior invoices \$85,000
- iv. Fee due this invoice (*not to exceed 85% of fee earned based upon negotiated contract fee percentage*) \$8,218

Total Amount Billed	\$175,020
Adjustments (+/-)	- <u>\$8,218</u>
Grand Total	\$166,802